Government-linked Intermediaries and Their Roles in Chinese Industrial Clusters: A Case from Haining City

Yongyi Shou, Yingying Chen
School of Management, Zhejiang University, Hangzhou, China
(*yshou@zju.edu.cn*)

Abstract – **As critical service providers, the importance of intermediaries are increasingly recognized by policymakers in recent years. This paper investigates the roles of intermediaries, especially the roles of government-linked intermediaries in China. A case study was conducted in Haining city which is well known for its leather cluster. We find out that government-linked intermediaries have many distinctiveness compared with other intermediaries. Bridging between governments and firms, they can develop a mixed strategy to promote the development of local industrial cluster and regional economy.**

Keywords - **Intermediary, cluster, government-linked intermediary**

I. INTRODUCTION

Industrial clusters and regional innovation systems (RISs) have played significant roles all over the world. Most relevant researches focus on the economic geography, industrial organization, technology innovation and etc. However, along with the globalization, the intermediaries become one of the indispensably parts [1]. Actually, in technology clusters, service intermediaries together with private firms, universities and research institutes, governments, and venture capitalists, form an industrial ecology that facilitates and disciplines the development of technology firms [2]. Moreover, two major types of agents can be indentified within an RIS, namely productive firms and supporting institutes. The latter, such as technology agents, training centers, research institutes, industrial associations and financial agents, are regarded as service intermediaries within an RIS [3].

As discussed above, intermediaries become a research focus in the very recent years. In this paper we aim to explore the roles of a specific type of intermediaries for the development of industrial clusters and regional economies. The leather cluster in Haining City, as a typical case, is described and discussed in this paper.

II. THE INTERMEDIARY

A. Background

Small and medium-sized enterprises (SMEs) are important agents of cluster economic development throughout the world. SMEs play a significant role in the economy as job creators and economy drivers. However, they are still facing various problems which can hold back economic development.

Innovations can be described as the result of interactions and feedback loops of different actors in innovation systems [4]. Tacit knowledge and advanced technology often are embedded in skilled persons and specific institutions. Moreover, learning obviously requires a minimum level of trust amongst the knowledge distributors and the recipients. The same applies for institutional learning as well. Without a certain minimum level of trust, institutional learning cannot take place [5]. Meanwhile, SMEs tend to have narrow external search scope because they typically have limited external contacts, and almost rely upon their immediate personal networks for identifying opportunities [2]. As a result, innovation always cannot take place very often.

As the majority of industrial clusters, SMEs cannot afford neither expensive equipment nor professional research teams to take R&D and innovation activities. They even have not established relationships with outside actors and have very limited social capital. Having a short history, lacking of a proven performance record, resources, legitimacy, and status resources make it difficult for them to access inter-firm networks.

Within today's business environment, which is characterized by globalization, industry convergence, and rapid technology change, no company is smart enough to know what to do with every new opportunity it finds [6]. Globalization has systemically affected the way all firms undertake innovation.

Due to all these limitations, most SMEs cannot carry out government policy effectively. Environmental protection standards are one of the questions. Although SMEs continue to have the advantages of flexibility and rapid response, all of these gaps may lead to polarization dilemma. This kind of territorial cohesion may bring even worse consequence [5].

B. Roles of intermediary

Some studies focusing on network analysis demonstrate that scientific and technological knowledge, and patenting activities are both created and diffused through crucial nodes like universities, research institutions and firms. Roles of service intermediaries begin to attract scholars' attention [1,7]. An intermediary is chiefly an individual or organization that promotes and facilitates the flow of knowledge or resources between

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two or more parties, and contributes to technological and or organizational capacity building [1,8].

Zhang and Li proposed that in a technology cluster, new ventures' ties with service intermediaries can contribute to their product innovation by broadening their external search scope and reducing their search cost [2]. Silicon Valley is one of the most typical examples. Stanford University, trade associations, and a myriad of specialized consulting, market researches, public relations, and venture capital firms, as regional institutions, provide powerful support for the industry development.

Intermediaries have several characteristics. For example, as an inevitable part of an RIS, intermediaries sit at the intersection of many firms, organizations, and various professional fields. Based on its location advantage, on one hand, they act as repositories for information, knowledge, and opportunities in the cluster, facilitating the exchange of information concerning innovation among firms [6]. On the other hand, they maintain extensive networks of ties to different parts of the social system, which can help broadening the scope of the innovation search and reducing the search cost. After all, intermediaries have a powerful influence on the speed of diffusion and uptake new products and services by household and firm adopters.

Zhejiang Province has the most developed clusters in China, and intermediaries have been booming these years. So far, Zhejiang Province has 108 public service platforms, 40 industry associations, 40 large professional markets, and 317 banks, 54 securities, 8396 professional and technical services (see Table I). All of these institutes provide various services, including facilitating dissemination of knowledge and information, promoting cooperation and providing capital, public service and etc.

III. THE GOVERNMENT-LINKED INTERMEDIARY

Porter's diamond model has stressed the government as a crucial factor which can affect every aspect of the model directly or indirectly [9]. In most developed countries, governments do not interfere with the market economy directly. However, in the context of developing countries, especially in China, government agencies and policies are quite different from those of the developed countries. Many SMEs and new ventures are clustering in Science Parks and Economic Development Zones which can provide them an interactive network. Moreover, with the development of clusters, SMEs and large enterprises in a same cluster are always in a game, which can inevitably lead to many questions on industrial and regional levels. For example, they cannot come to an agreement on the product standardization and detecting standards. In this part, we are going to explore the role of government-linked intermediaries (GLIs).

TABLE I
STATISTICS OF INTERMEDIARIES IN ZHEJIANG PROVINCE

Category	Number of enterprises
Banks	317
Securities	54
Insurance	512
Professional and technical services	8396
Science and technology promotion	6326
Leasing	2031
Other financial activities	1601

(Data resource: Zhejiang Statistical Yearbook 2011)

As a distinct organizational population, government-linked intermediaries can effectively operate between policy makers and implementers to affect changes in roles and practices for both parties. They can help make reources and information widely available to the public [10]. Mahmood also suggested that when a country is far from the technological frontier, the government can spur economic development through the centralization of economic and political control [11]. Government sponsored institutions such as Small Business Administration (SBA), innovation platform, regional forums and bureaucracy agencies are all in this range.

A. Roles of government-linked intermediaries

Compared with other intermediaries, government-linked intermediaries still have their own distinctive characteristics.

At the macro-level, government-linked intermediaries not only sit at the intersection of different industry fields and departments, but also sit at the *intersection* of governments and firms. With this advantage, they can optimize the allocation of resources through the strong social capital and power. They can foster cluster cooperation at policy level by bringing together national and regional authorities and innovation agencies active in the field of clusters. It aims to jointly design better cluster policies and to raise the excellence of cluster programs and inclusive development [12].

At the meso-level, on one hand, having a deep insight of firms' needs and representing the interests of firms, government-linked intermediaries can get involved in the decision-making and provide accurate, timely information, resources and opportunities to grass-roots enterprises. On the other hand, through government-linked intermediaries, governments can avoid direct intervence but potentially influence both the pace and the direction of industrial innovation [13,14].

At the micro-level, this kind of intermediaries do not have to own all the innovation resources and elements, but are more like coordination mechanisms or systems. For example, within a technology platform, laboratories, engineering centers and training schools are the key parts, so the platform can concatenate those various nodes into an effective network system which is unified and distributed logically. Secondly, due to the government support and strong social capital, all the professionals from enterprises, universities and scientific institutes, administrative departments are assembled to amplify the effectiveness of innovative elements. Thirdly, the service model is different from other intermediaries. Government-

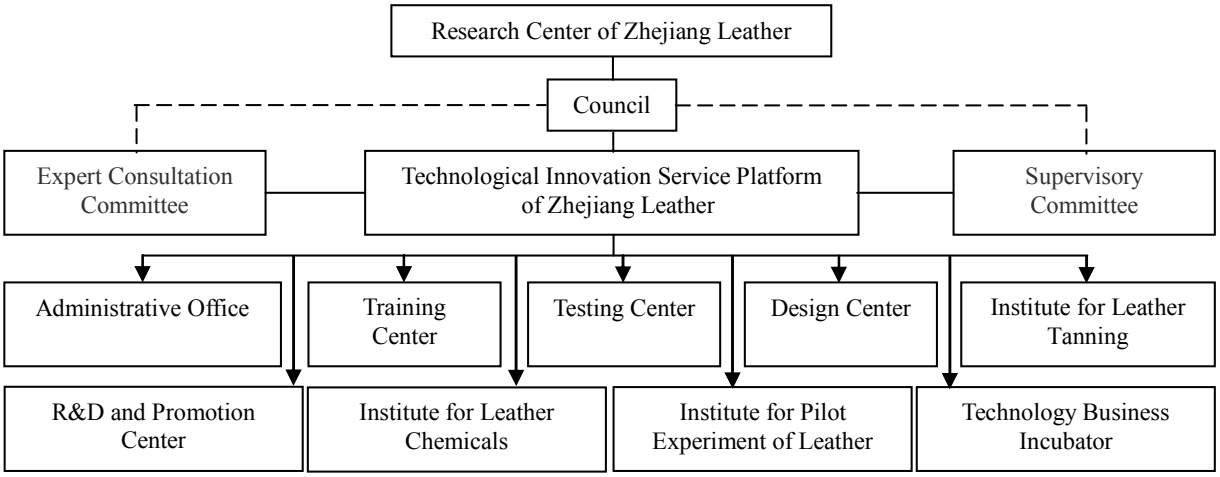

Fig. 1. The organizational structure of technological innovation service platform

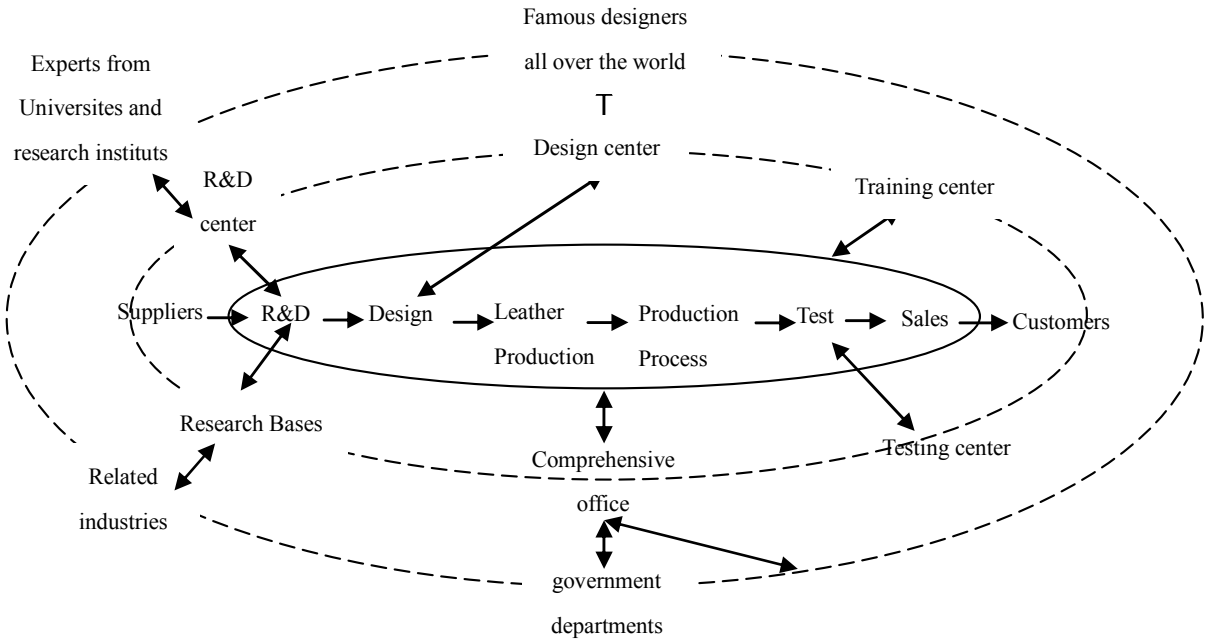

Fig. 2. Roles and positions of these divisions in the industrial chain

linked intermediaries are more like a large team to provide service and solution for regions and clusters, especially the public problems about technologies and environments.

B. The innovation platform

Though government-linked intermediaries are not so common, many successful cases are arousing general concerns, among which the innovation platform is quite typical.

In 1999, the American Council on Competitiveness released a report *Innovate America: Thriving in a World of Challenge and Change*. It firstly proposed the concept of *platform for innovation*. In the United Kingdom, Innovation Technology Strategy Board innovation platforms[1] are built to improve coordination between the key players from the industry, academia and government. They aim to fundamentally change the ability of UK businesses, to boost the UK economic performance, and to provide higher quality of public services. The KIS-IP (knowledge intensive services innovation platform)[2]is a European initiative funded under Europe INNOVA, focusing on new or better innovation support mechanisms for SMEs, particularly in technological and industrial fields. The Cluster-IP brings together cluster organizations from different countries willing to cooperate in working on the modernization of cluster support services in the EU. In Zhejiang Province, there

[1] http://www.innovateuk.org
[2] http://www.europe-innova.eu/web/guest/library

TABLE II
RESOURCES AND MAIN FUNCTIONS OF THESE DIVISIONS

Divisions	Resources related	Main functions
Administrative Office	Professional schools of leather. Such as Sichuan University, Shanxi University of Science & Technology, Wenzhou University and etc.	Coordinate all the cooperators, improve the collaboration of research,
Training Center	Experts from NAFA, Copenhagen, UK, Holland, Italy and etc.	Provide trainings about design, fashion style, marketing skills, store decoration and etc.
Testing Center	All the sophisticated but expensive equipments invested by government and enterprises	Comprehensive test and analysis, researches on leather standardization, solutions for pollution and etc.
Design Center	Designers from China Academy of Fine Art, Zhejiang Sci-Tech University and Fudao Design	Product design and exhibition, and effort to build HAI Style and local brands
Institute for Leather Tanning	Haining Leather Star Co., Ltd	Improve green production, reduce environment pollution, strengthen technology content, promote circulating production.
R&D and Promotion Center	All the related universities and research institutes based on programs	Take researches on leather chemicals and Leather technology, provide laboratory, prototype and samples.
Research Base for Leather Chemicals	Brother Enterprises Holding Co., Ltd	Engaged in the development of green leather chemicals technology research and applications.
Research Base for Pilotscale Experiment of Fur Leather	Fusheng Fur Leather Co., Ltd	Promote the leather industry, clean production and technological progress and improving the quality of fur leather products.
Technology Business Incubator	New ventures	Provide lower-cost space and office equipment, better technology and expert guidance, and help develop the market

are 57 industry innovation platforms covering clothing, textile, biotechnology and etc., scattering in different cities and counties of Zhejiang Province.

IV. THE CASE IN HAINING

As discussed above, few studies have been recorded on the government-linked intermediaries. This uneven focus invites further investigation into the roles of intermediaries in one of the emerging economies - China.

A. Haining leather cluster and its innovation platform

As one of the most developed clusters in China, till 2009, Haining has a population of 655 thousand, and three provincial level economic development zones. Haining has the largest professional market of leather in China and occupies one third of the sales worldwide. For a long time, especially after the low development in 1998 and financial crisis in 2008, Haining municipal government has taken a series of measures to improve the local economy. The technological innovation service platform of Zhejiang leather cluster is a most successful and typical case. In 2007, the technological innovation service platform of Zhejiang leather cluster was jointly established by Haining Leather Research Institute, Haining China Leather City and Wenzhou University, with a total investment 0.155 billion. Haining Leather Research Institute, which was established in May 2007, is the leading institute. Its organizational structure is shown in Fig. 1.

B. Main roles and performance

As seen in Fig 1, the technological innovation service platform of Zhejiang leather cluster is one of the innovation platforms invested by Research Center of Zhejiang Leather. The council, along with Expert Consultation Committee and Supervisory Committee, is in charge of supervision and performance evaluation. Nine divisions work together and integrate all the resources to improve the leather industry (see Fig. 2 and Table II).

As shown in Fig. 2, the services provided by the platform almost cover the whole leather industry chain. Obviously, the platform has engaged into the cluster and become one of the significant parts. Various resources can be introduced into Haining, both home and abroad. For example, the R&D and Promotion Center endeavors to carry out technology programs with the help of universities and research institutes. So far, it has helped to solve 11 technical problems and promotes 28 new technologies. The Testing Center has provided testing services over 15,000 times, developed 24 national or industrial standards for the leather industry, and earned

revenue of 11.59 million. The Training Center has provided skill training and management training over 2,000 times.

However, there is still unbalance in this platform. From Fig. 2 and Table II, we can see that the Administrative Office, Training Center, Testing Center, R&D and Promotion Center, and two research bases are more significant than other divisions. The possible reasons are as follows. Many firms can deal with problems in management and sales by themselves. Especially in SMEs, the entrepreneurs are not only the owners but also the managers. They tend to make decisions and figure out solutions personally. When it comes to the public and key technical problems, such as standardization, testing and environmental protection, information asymmetries and no resource sharing make it difficult to take R&D and innovation activities. Even leading enterprises cannot find a satisfactory solution. Only the authority or local government can reconcile such problems. Government-linked intermediaries, or innovation platforms, can develop a mixed resource strategy to establish network structures and strengthen political functions. Moreover, it takes a long time from the very beginning till the innovation platform can operate smoothly. Lacking of experiences and too many stockholders involved make unexpectedly inefficient. Government-linked intermediaries should be more market oriented for the industrial cluster.

In sum, intermediaries sit at the intersection of many firms, organizations, and industries. And our study also contributes to understand that, government-linked intermediaries, in a unique position, have a great power to coordinate the benefits between firms and governments. So our findings suggest that managers and policy makers should more foucs on establishing connections with each other to improve the industry, and government-linked intermediaries should be the best way.

V. CONCLUSIONS

Based on existing researches, this paper reviews the roles of intermediaries, especially the roles of government-linked intermediaries in industrial clusters and regional economies from the macro-level, meso-level and micro-level. There are many distinctive characteristics compared with other intermediaries. A case study was done in Haining City which is well known for its leather cluster..

As critical service providers, government-linked intermediaries are increasingly recognized by policymakers. It is important to policy-makers and other stakeholders to leverage the innovation capabilities of clusters through policies favorable to intermediary institutions. And as to government-linked intermediaries, it is important to improve their efficiency and balance their service capability so as to better serve the SMEs within the cluster.

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